



SPACE SHUTTLE PROGRAM
Space Shuttle Projects Office (MSFC)
NASA Marshall Space Flight Center, Huntsville, Alabama



STS-107/ET-93 Flight Readiness Review

External Tank Project



January 9, 2003



External Tank Status

Presenter
Terry Greenwood, NASA/ET-MP31

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- **First LWT to fly with three Block II SSMEs**
 - LWT LH2 configuration previously certified for SSME Block II implementation on ET-92
 - Block II engine cluster requires higher pressures for LH2 tank pre-press
 - Analysis showed that critical structural margins of safety are unaffected for the higher pressures
- **Mission Specific Assessment**
 - GO2 ullage pressure prediction showed LO2 tank ullage pressure exceeding ICD limits
 - LWT ICD limits are more constraining than SLWT
 - Program changes since last LWT mission reduced margin to the limits
 - Block II SSME tags, 100.15% sensor loading ground rule, and SRB burn rate prediction methodology update
 - Analysis showed that critical structural margins of safety are unaffected for the new predicted maximum and minimum ICD limits – Approved by PRCBD S061917
- **Limited Life Component Status**
 - All items within required life through scheduled launch date plus 90 days
- **No Significant Processing Anomalies**
- **No Significant Changes**
- **Readiness Statement**



Readiness Statement

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**The External Tank, ET-93, is certified and ready
for STS-107 flight pending completion/closure
of open and planned work**